

C1
(continued)

of the lead frame; a sealing resin which seals an outer peripheral region of said semiconductor chip, said region including a thin metal wire region of the upper face of said semiconductor chip, and a lower region of said die pad; and outer lead portions which are arranged in a bottom face region of said sealing resin, wherein said lead frame is subjected to an upsetting process so that said die pad is located at a position higher than said inner lead portions and at least a portion of the outer periphery of the semiconductor chip extends outward from the outer periphery of said die pad.

2. (Amended) A resin molded type semiconductor device comprising: a semiconductor chip which is mounted on a die pad of a lead frame; thin metal wires which electrically connect terminals of an upper face of said semiconductor chip to inner lead portions of said lead frame; a sealing resin which seals an outer peripheral region of said semiconductor chip, said region including a thin metal wire region of the upper face of said semiconductor chip; and outer lead portions which are arranged in a bottom face region of said sealing resin and which are formed to be continuous to respective inner lead portions, wherein at least one groove portion is formed in a surface of each of said inner lead portions and at least a portion of the outer periphery of the semiconductor chip extends outward from the outer periphery of said die pad.

C1
(continued)

3. (Twice Amended) A resin molded type semiconductor device comprising: a semiconductor chip which is mounted on a die pad of a lead frame; thin metal wires which electrically connect terminals of an upper face of said semiconductor chip to inner lead portions of said lead frame; a sealing resin which seals an outer peripheral region of said semiconductor chip, said region including a thin metal wire region of the upper face of said semiconductor chip; and outer lead portions which are arranged in a bottom face region of said sealing resin and which are formed to be continuous to respective inner lead portions, wherein at least one groove portion is formed in a surface of each of said inner lead portions, a connecting portion of each of said thin metal wires is coupled to a respective inner lead portion at a flat surface region of said respective inner lead portion adjacent said at least one groove portion.

4. (Amended) A resin molded type semiconductor device comprising: a semiconductor chip which is mounted on a die pad of a lead frame; thin metal wires which electrically connect terminals of an upper face of said semiconductor chip to inner lead portions of said lead frame; a sealing resin which seals an outer peripheral region of said semiconductor chip and which contacts a bottom face of said semiconductor chip, said region including a thin metal wire region of the upper face of said semiconductor chip; and outer lead

portions which are arranged in a bottom face region of said sealing resin and which are formed to be continuous to respective inner lead portions.

5. (Amended) A resin molded type semiconductor device comprising: a semiconductor chip which is mounted on a die pad of a lead frame; thin metal wires which electrically connect terminals of an upper face of said semiconductor chip to inner lead portions of said lead frame; a sealing resin which seals an outer peripheral region of said semiconductor chip and which contacts a bottom face of said semiconductor chip, said region including a thin metal wire region of the upper face of said semiconductor chip; and outer lead portions which are arranged in a bottom face region of said sealing resin and which are formed to be continuous to respective inner lead portions, wherein a widened portion is formed in each of said inner lead portions and at least one groove portion is formed in a surface of each of said inner lead portions.

6. A resin molded type semiconductor device comprising: a semiconductor chip which is mounted on a die pad of a lead frame; thin metal wires which electrically connect terminals of an upper face of said semiconductor chip to inner lead portions of said lead frame; a sealing resin which seals an outer peripheral region of said semiconductor chip, said region including a thin metal wire region of the upper face of said semiconductor chip; and outer lead

C1
(concluded)

portions which are arranged in a bottom face region of said sealing resin and which are formed to be continuous to respective inner lead portions, and a widened portion is formed in each of said inner lead portions, at least one groove portion is formed in a surface of each of said inner lead portions, a connecting portion of each of said thin metal wires is coupled to a respective inner lead portion at a surface region of said respective inner lead portion adjacent said at least one groove portion.

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8. (Twice Amended) A method of manufacturing a resin molded type semiconductor device, said method comprising the steps of: performing an upsetting process on a lead frame so that a die pad of said lead frame is located at a position higher than inner lead portions of said lead frame; bonding a semiconductor chip to said die pad portion of said lead frame, wherein at least a portion of the outer periphery of the semiconductor chip extends outward from the outer periphery of said die pad; electrically connecting terminals of said semiconductor chip to said inner lead portions of said lead frame by thin metal wires; sealing an outer peripheral region of said semiconductor chip, thereby forming a sealing resin, said region including a region of an upper face of said semiconductor chip that is electrically connected by said thin metal wires, and a lower region of said die pad portion; and shaping outer lead portions of the lead frame so as to be exposed

C²
(concluded)

from an outer face of said sealing resin.

C³

10. (Amended) A method of manufacturing a resin molded type semiconductor device, said method comprising the steps of: bonding a semiconductor chip to a lead frame having inner lead portions in each of which a widened portion is disposed and at least one groove portion is formed; electrically connecting terminals of said semiconductor chip to said inner lead portions of said lead frame by thin metal wires; sealing an outer peripheral region of said semiconductor chip, thereby forming a sealing resin, said region including a region of an upper face of said semiconductor chip and electrically connected by said thin metal wires, and a lower region of said semiconductor chip; and shaping outer lead portions of said lead frame so as to be exposed from an outer face of said sealing resin, and, when said terminals of said semiconductor chip are to be electrically connected to said inner lead portions by said thin metal wires, the connection is performed while connecting portions of said thin metal wires are coupled to respective inner lead portions at a flat surface region of said respective inner lead portion adjacent at least one groove portion.

Please add the following new claims:

C⁴

-16. A resin molded type semiconductor device according to claim 3, wherein said at least one groove is a plurality of grooves which define a contact portion therebetween, said flat surface

region located on said contact portion.

17. A resin molded type semiconductor device according to claim 4, wherein a widened portion is formed in each of said inner lead portions.

18. A resin molded type semiconductor device according to claim 4, wherein at least one groove portion is formed in a surface of each of said inner lead portions.

19. A resin molded type semiconductor device according to claim 6, wherein said surface region is flat.

20. A resin molded type semiconductor device according to claim 6, wherein said at least one grove is a plurality of grooves which define a contact portion therebetween, said flat surface region located on said contact portion.

21. A method of manufacturing a resin molded type semiconductor device according to claim 10, wherein said at least one grove is a plurality of grooves which define a contact portion therebetween, said flat surface region located on said contact portion.

22. A resin molded type semiconductor device according to claim 1, wherein the entire outer periphery of the semiconductor chip extends outward from the outer periphery of said die pad.

23. A resin molded type semiconductor device according to claim 2, wherein the entire outer periphery of the semiconductor

chip extends outward from the outer periphery of said die pad.

24. A method of manufacturing a resin molded type semiconductor device according to claim 8, wherein the entire outer periphery of the semiconductor chip extends outward from the outer periphery of said die pad.

25. A resin molded type semiconductor device according to claim 1, wherein said die pad is smaller in size than said semiconductor chip.

26. A resin molded type semiconductor device according to claim 2, wherein said die pad is smaller in size than said semiconductor chip.

27. A method of manufacturing a resin molded type semiconductor device according to claim 8, wherein said die pad is smaller in size than said semiconductor chip.

28. A resin molded type semiconductor device according to claim 1, wherein said die pad is smaller in area than said semiconductor chip.

29. A resin molded type semiconductor device according to claim 2, wherein said die pad is smaller in area than said semiconductor chip.

30. A method of manufacturing a resin molded type semiconductor device according to claim 8, wherein said die pad is smaller in area than said semiconductor chip.